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ABSTRACT

Project SEE (Student Employment Experiences) was initiated to provide information on the long-term employment experiences of former vocational education students, especially special needs students, and on the long-range effects of their training. In spring 1983 a three-year followup survey was sent to members of the first annual sample of FUSE (Follow-up of Students and Employers) system participants. Of the 3,529 students in the first annual sample, 1,900 returned the three-year followup questionnaire. The three-year followup results differed from the one-year results on the variables of unemployment rate and employment in a field related to their high school training. These differences did not necessarily mean the one-year followup results were premature. The results seemed to complement each other in revealing the true impact of high school vocational programs over time. Over the two years following the one-year followup, the number working in a field related to high school training decreased significantly. No significant differences were indicated in salary for special needs and non-special needs students. The special needs group had less favorable employment experiences in terms of rate of employment and number of months employed. (Instruments, newsletters, and selected data are appended.) (YLB)

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A LONGITUDINAL STUDY OF VOCATIONAL EDUCATION STUDENTS FROM CALIFORNIA SECONDARY SCHOOLS

PROJECT SEE
STUDENT EMPLOYMENT EXPERIENCES

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A Longitudinal Study of Vocational Education Students from California Secondary Schools

Yungho Kim and Calvin E. Wright

Prepared for
Office of Vocational Education
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INTRODUCTION

Background

Starting in 1977 staff in the Vocational Education Unit of the California State Department of Education began responding to provisions in the Vocational Education Amendments of 1976, Public Law 94-482, that strengthened requirements for accountability and for the evaluation of program effectiveness. One of the requirements is to evaluate the effectiveness of each formally organized program or project supported by federal, state, and local funds. These evaluations are to be in terms of student employment success as measured by: rates of employment and unemployment; wage rates; duration of employment; and employer satisfaction with the performance of vocational education students as compared with the performance of persons who have not had vocational education. The regulations also require that each state collect data to ascertain the extent to which former vocational education students find employment in occupations related to their training.

In order to meet the requirements, Vocational Education Unit personnel developed a follow-up system for vocational education students called FUSE (Follow-up of Students and Employers). The FUSE system has been implemented statewide since the 1980-81 school year. Each year one-fourth of secondary level local education agencies in California participate in the FUSE. The FUSE system yields information on former vocational education student experiences about one year after the student has completed or left a program. It is widely believed, however, that one-year follow-up results are premature since former students should be given an opportunity to settle down or complete any additional studies before they are followed up. At the end of three years most former students will have more stable jobs, or will have completed their post-secondary vocational training and have been employed for at least one year. Thus, the need for a long-term follow-up study becomes apparent.

Another impetus for a statewide longitudinal follow-up study of secondary level vocational education program completers and leavers was the results of a 1979 study completed by the National Center for Research in Vocational Education (NCRVE). This study analyzed the ability of the California secondary vocational evaluation system to evaluate programs and services for special needs populations. The study concluded that through its vocational evaluation system the state would not have adequate data on the employment experiences of the special needs populations over time.

In 1979 executive staff in the Vocational Education Unit decided to initiate a series of longitudinal surveys to run three to five years each on an annual sample of vocational education program completers and leavers. Each annual sample would consist of both special needs and other former students. This study is called Project SEE (Student Employment Experiences). The planning work for Project SEE began in late 1981, and the study design was completed in July 1982 (Wright & Kim, 1982).

Objectives of Project SEE

Project SEE is being conducted to fulfill a California State Department of Education need for information on the long-term employment experiences of former vocational education students, especially special needs students, and on the long-range effects of their training. Specific objectives of the study are to address the following questions:

1. Are FUSE one-year follow-up results premature since former students did not have enough time to settle down or complete additional studies?
2. Are the former students working in the field of their training, especially special needs students?
3. What is the salary of the former students? How does the salary of the special needs students compare with those of other vocational education students?
4. How do the employment experiences of special needs students compare with those of other vocational education students?

To provide an overall picture of this longitudinal follow-up study, the major events of Project SEE are shown in Figure 1 below. There are three cohorts (annual samples) in Project SEE, each selected from FUSE participants. The first sample was selected in 1981, the second in 1982, and the third in 1983. In the spring of 1983, a three-year follow-up questionnaire was sent to members of the first annual sample. This report presents the findings from this three-year follow-up survey of the first annual sample.

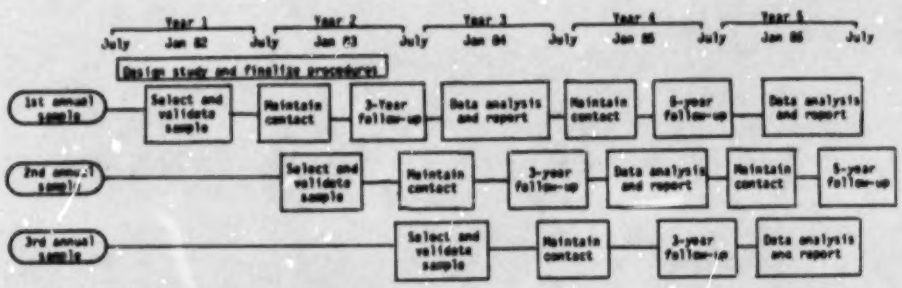

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Figure 1: Major Events of Project SEE

METHOD

This section addresses selection of the sample, maintaining contact with participants, three-year follow-up data collection, and data analyses.

Selection of Sample

As mentioned in the Introduction section, the FUSE survey provides one-year follow-up information on former vocational education students. Project SEE is to find out what happens to those former students three and five years after high school. Therefore, the population from which each annual Project SEE sample is drawn is those former students who responded to the annual FUSE survey. The Project SEE sample was to be composed of two subsamples: special needs and nonspecial needs students. After reviewing 1981 FUSE results and estimating the Project SEE sample size using different sampling strategies, the following sampling plan was adopted.

First, all handicapped and limited English-speaking students were included in the sample. There were relatively few of these students in the FUSE group. Second, a sample of disadvantaged students was drawn. The sample size was twice what was needed for a 5% confidence level. Twice the 5% value was used assuming a 50% attrition rate. Third, for all remaining nonspecial needs students the population was stratified by program area and within each of the six program areas a random sample was drawn. The sample size for each program area was twice what was needed for a 5% confidence level, or all former students if less. The FUSE population included a large number of females and former students whose racial/ethnic designation was other than white. Therefore, women and minority group members would be represented in the sample in about the same proportion as in the population.

As a result of applying the sampling plan, the first annual sample of 3,529 former students was selected from a population of 11,054. The sample represented about 32% of the population. The number of former students in the population and sample is shown in Table 1. To validate the Project SEE first annual sample, selected characteristics of the sample were compared with corresponding population characteristics. It was found that the characteristics of the Project SEE sample were very similar to those for the population (Kim & Wright, 1982).

Maintaining Contact

Once the first annual sample was selected, a method of maintaining contact

Table 1

Number of Former Students in the Population and Sample

Group	No. of Former Students		Response Rate (Percent)
	Population	Sample	
Special Needs			
Handicapped	138	138	100.0
Limited English Proficient, not Handicapped	150	150	100.0
Disadvantaged, not Handicapped or LEP	1,368	639	46.7
Sum Special Needs	1,656	927	56.0
Nonspecial Needs (not Handicapped, LEP, or Disadvantaged)			
Agriculture	829	525	63.3
Distributive Education	213	213	100.0
Health Occupations Education	153	153	100.0
Home Economics Related Occupations	303	303	100.0
Office Occupations	5,905	769	13.0
Trade and Industrial Occupations	1,995	639	32.0
Sum Nonspecial Needs	9,398	2,602	27.7
Total	11,054	3,529	31.9

with the former students in the sample was developed and implemented. The method is described in detail in the Project SEE handbook (Wright & Kim, 1982). It involved obtaining, from members of the sample, additional information that could be used to "track" them in the future, and sending out a two-page newsletter called "Report to Follow-up Study Participants" at about six-months intervals. Many previous follow-up studies have used such newsletters to participants to maintain participant interest in the study and to obtain current address information (e.g., Bachman et al., 1972; Bailey, 1976; and Flanagan & Cooley, 1966).

The first wave of a tracking information form was mailed to the Project SEE participants in June 1927. The form used is shown in Appendix A. A tracking information file was updated based on forms returned by the participants and other documents received from the Postal Service. Approximately one month after the mailing, a second mailing was made to nonrespondents.

A newsletter was sent out to Project SEE participants in June 1982 with the tracking information form. It explained the importance of the study and asked for help. Several short articles were included in the newsletter which were based on data from the FUSE survey in which they had participated in 1981. A copy is shown in Appendix B. Another similar newsletter was sent in December 1982 (See Appendix C). An address change card was included in the mailing of the second newsletter. All mailings used first class mail with the "Address Correction Requested" option to obtain as much current address information as possible. The tracking information file was updated from documents returned as a result of sending out the reports to the study participants.

Three-Year Follow-up Data Collection

One-year follow-up data on Project SEE participants were available through the FUSE Data Processing Center, because the Project SEE sample was selected from 1981 FUSE survey respondents. The FUSE questionnaire used in the spring of 1981 is shown in Appendix D.

The Project SEE three-year follow-up questionnaire was developed to obtain information needed to address the study objectives as given in the Introduction section of this report. In addition, the following factors were considered:

1. The questionnaire should be as short as possible to increase the response rate.
2. The obtained data should be as comparable as possible with FUSE one-year follow-up data.
3. Key variables recommended or included in past major follow-up studies should be included as much as possible.

The three-year questionnaire is shown in Appendix E. Employer evaluation of former students was not part of the three-year follow-up, because FUSE results indicated that the employer response rate would be too low to be useful.

The first mailing of the three-year follow-up questionnaire was made in May of 1983 to 3,405 of the 3,529 former students in the Project SEE first annual sample. Six former students who asked not to participate and 118 for whom letters had previously been returned twice as undeliverable were excluded from the mailing. Two weeks after the first mailing, a reminder postcard was sent to the study participants for whom questionnaires had not been received and for whom letters had not been returned as undeliverable. A total of 1,124 questionnaires were returned from the first mailing.

A second mailing was made to 2,223 nonrespondents one month after the first mailing. Five hundred twenty-four questionnaires were returned from the second mailing. A third mailing was made to 1,659 nonrespondents one month after the second mailing. Two hundred fifty-two questionnaires were returned from the third mailing. Thus, 1,900 of the 3,529 former students (54%) in the first annual sample returned the three-year follow-up questionnaire. Funds were not available for a fourth mailing or to offer financial incentives to the respondents. Also, funds were not available to conduct a telephone or personal interview with nonrespondents.

Data Analyses

As part of survey operations, the tracking information file was updated with appropriate information (e.g., date the questionnaire was received, new name or address) from questionnaires returned by participants. All questionnaires from the three mailings were then prepared for key entry. The preparation included: assigning a three-digit Standard Occupational Classification (SOC) code from information given on item 6 (job title and job duties), clerically determining an average hourly salary, eliminating inappropriate multiple responses, and coding individual item responses.

All key entry was given 100% verification and correction as necessary. Also, a program for computer editing of the data file was developed and used to check errors such as out of range, out of field, and illegal characters. Necessary composite variables were generated and the data file was merged with the one-year follow-up data.

Essentially, three separate data analyses were made. The first analysis was to compare three-year follow-up survey respondents and nonrespondents on selected FUSE one-year variables. This analysis was done as an indirect method of assessing nonresponse bias. It was mentioned by O'Reilly and Asche (1979) and by Morrel (1979). Most of the variables used in the analysis were demographic characteristics, such as sex, ethnic group, and program area.

The second analysis was to compare one-year and three-year data. Such comparisons constitute the main analysis for any longitudinal follow-up study. In this analysis, for most variables all available one-year data and all available three-year data were used. However, in some cases only matched data were used in the analysis if doing so made more sense. The third analysis was to compare the special needs group and the nonspecial needs group. Such comparisons were

necessary because a major emphasis of this study was placed on the employment experiences of special needs students. The two groups were compared on selected variables such as employment status, average hourly salary, and job relatedness of vocational training. Results from all three of the analyses described above are presented in the following section.

RESULTS

This section is organized into three subsections. Results from the study of nonrespondents are presented first. The results from comparisons of one-year and three-year data are then given, followed by the results from comparisons of the special needs and nonspecial needs groups. Data for each of the subgroups shown in Table 2 are given in Appendix F.

Study of Nonrespondents

The number and percentage of former students in the Project SEE sample who returned the three-year follow-up questionnaire are shown in Table 2 below.

Table 2

Number of Former Students Who Returned the Three-Year Follow-up Questionnaire

Group	No. of Former Students		Response Rate (Percent)
	Total Sample	Respondents	
Special Needs			
Handicapped	138	56	40.6
Limited English Proficient, not Handicapped	150	76	50.7
Disadvantaged, not Handicapped or LEP	639	309	48.4
Sum Special Needs	927	441	47.6
Nonspecial Needs (not Handicapped, LEP, or Disadvantaged)			
Agriculture	525	293	55.8
Distributive Education	213	110	51.6
Health Occupations Education	153	94	61.4
Home Economics Related Occupations	303	146	48.2
Office Occupations	769	461	59.9
Trade and Industrial Occupations	639	355	55.6
Sum Nonspecial Needs	2,602	1,459	56.1
Total	3,529	1,900	53.8

Since about 46% of the former students in the sample did not respond, it was necessary to compare the nonrespondents with the respondents to see whether the two groups differed significantly on certain characteristics which might introduce bias into the study findings. As mentioned before, additional data collection

from the nonrespondents through a telephone or personal interview could not be done because of limited funds. Therefore, the comparison of nonrespondents and respondents had to be based on the one-year data.

As Table 2 shows, the response rate was lowest for the handicapped group and highest for the health occupations education group. As a whole, the response rate for the special needs group was significantly lower than for the nonspecial needs group. There were some differences in the response rate among the program areas within the nonspecial needs group, although the differences were not statistically significant.

There were several characteristics for which the nonrespondents and respondents differed significantly in the response rate. For instance, a higher proportion of females responded than males, and those who were employed or attending school in 1981 responded at a higher rate than those who were not employed or not attending school in 1981. Also, some ethnic groups were more responsive than others, as shown in Table 3.

Table 3

Characteristics for which there were Differences in the Response Rate to the Three-Year Questionnaire

Characteristic		Response Rate (%)
Sex:	Male	51.8
	Female	55.4
Ethnic group:	American Indian	56.7
	Filipino	62.5
	Asian	59.3
	Black	38.4
	Hispanic	52.0
	White	55.9
Employment Status (1981):	Employed	57.6
	In military	46.4
	Unemployed	45.9
	Not in labor force	50.9
Educational Status (1981):	Attending school	57.9
	Not attending school	50.2

The results indicate that the nonrespondent group was somewhat different from the respondent group on several characteristics. The three-year survey respondent group overrepresents females, nonspecial needs students, and those who were employed in civilian jobs or attending school in 1981. It underrepresents Blacks, the handicapped, and those who were in the military service or unemployed in 1981. These findings should be kept in mind in interpreting the results from the three-year survey.

Comparison of First- and Third-Year Results

First-year and third-year results are presented in terms of educational status, postsecondary vocational training, employment status, months employed since high school, helpfulness of high school training in getting jobs, occupational field of employment, salary, hours worked per week, relatedness of job to vocational training, and job satisfaction.

Educational status. Former vocational education students were asked in the one-year and three-year follow-up surveys if they were attending school. The response categories used in the surveys and the percentage of former students responding to each category are shown in Table 4 below. Three years after high

Table 4

Educational Status of Former Vocational Education Students
One Year and Three Years After High School

Educational Status	Percent of Former Students	
	First Year (1981) (N = 3422)	(Third Year (1983) (N = 1898)
Attending school	48.9	-
Attending 4-year college or university	-	18.0
Attending junior or community college	-	23.2
Attending technical, trade, or business school	-	3.4
Not attending school	51.1	55.4

school about 45% of the former vocational education students were still in school. About 23% were attending a junior or community college. This included part-time students. The percentage attending school decreased slightly from the first year to the third year, as expected.

Postsecondary vocational training. In the three-year follow-up survey, former vocational students were asked if they had received any vocational training since they left high school. About 49% of them reported some post-secondary vocational training. The largest number received the vocational training at a community college (24%). Some received the training at a technical, trade, or business school (14%), in a Regional Occupational Center or Program (5%) or in an apprenticeship program (4%). Since the question was not included in the one-year follow-up survey, first-year and third-year comparisons could not be made.

Employment status. The employment status reported by former vocational education students is shown in Table 5 below. About 70% of them were employed in 1983, compared with 59% in 1981. About 13% considered themselves "unemployed"

Table 5

Employment Status of Former Vocational Education Students
One Year and Three Years After High School

Employment Status	Percent of Former Students	
	First Year (1981) (N = 3529)	Third Year (1938) (N = 1898)
Employed	58.9	70.0
Employed (full-time military)	3.1	4.1
Unemployed	17.2	13.1
Not in the labor force	20.8	12.8

three years after high school, which is lower than the 17% reported two years earlier. Also, people who considered themselves "not in the labor force" decreased by 8% from the one-year to the three-year follow-up. Those were the people who were not employed but not seeking employment because of their choice, illness, full-time student status, pregnancy, or other such reason.

Months employed since high school. A key question asked in terms of the employment experiences of former vocational education students was the number of months employed since they left high school. Both full-time and part-time employment were included. These data were collected only for the three-year follow-up in 1983. About 4% of the former students reported that they had never worked. About 19% worked for one month to 12 months, 20% worked for 13

to 24 months, and 28% worked for 25 to 36 months. About 29% of them worked for more than 36 months.

Helpfulness of high school training in getting jobs. Former vocational education students were asked whether the high school vocational training they had received was helpful in getting jobs. The responses are summarized in Table 6. Three years after leaving high school over 73% felt that the vocational training they received in high school was helpful in getting jobs. The percentage of former students who felt the training was not helpful at all actually

Table 6

Helpfulness of High School Vocational Training in Getting Jobs as Perceived by Former Vocational Education Students One Year and Three Years After High School

Response	Percent of Former Students	
	First Year (1981) (N = 2036)	Third Year (1983) (N = 1757)
Not at all	40.1	26.9
Some	31.8	47.1
A great deal	28.1	26.0

decreased by more than 13% from first year to third year. This result indicates that their perception of the usefulness of high school vocational training changed in a more positive direction over the two-year period.

Occupational field of employment. Job information (job title and job duties) was reported by those who were working at the time of the three-year follow-up survey. On the basis of this job information, the occupational field of each respondent was determined. Table 7 presents the occupational fields in which 1% or more of the respondents had jobs in 1983. Also shown are the percentages of former students in these occupational fields at the time of the one-year follow-up survey.

Three years after high school the largest number of former vocational education students (33%) had jobs in Clerical Occupations, such as secretaries, bank tellers, or bookkeepers. The next largest group (17%) had jobs in Service Occupations. The Service Occupations field covers quite diverse subfields, such as: Protective Service Occupations (fire fighters, police, guards, etc.): Food and Beverage Preparation Services Occupations (cooks, waiters, etc.); Health

Service Occupations (dental assistants, medical assistants, nursing aides, etc.); Cleaning and Building Service Occupations (maids, janitors, etc.); and Personal Service Occupations (cosmetologists, guides, child care workers, etc.) The third

Table 7

Occupational Field of Former Vocational Education Students
One Year and Three Years After High School

Occupational Field	Percent of Former Students	
	First Year (1981) (N = 1179)	Third Year (1983) (N = 1379)
Clerical occupations	31.9	32.6
Service occupations	18.3	16.7
Protective service occupations	(1.1)	(1.8)
Food and beverage preparation and services occupations	(9.4)	(6.8)
Health service occupations	(3.3)	(3.3)
Cleaning and building service occupations	(1.9)	(1.9)
Personal service occupations	(2.6)	(2.9)
Marketing and sales occupations	12.6	12.5
Mechanics and repairers	6.6	7.6
Production working occupations	7.4	6.5
Agricultural and forestry occupations	5.1	4.8
Technologists and technicians, except health	2.0	3.5
Health technologists and technicians	3.4	3.2
Construction and extractive occupations	3.0	2.9
Material handlers and laborers	4.1	2.4
Transportation and material moving occupations	1.8	2.3
Teachers, librarians, and counselors	1.1	1.2
Other occupations	2.7	3.8
Total	100.0	100.0

largest group (12%) had jobs in Marketing and Sales Occupations. Approximately 62% of the former students were working in one of the above three occupational fields after three years.

There were striking similarities in the occupational fields in which

former students held jobs in 1981 and in 1983. In both years the largest percentage of former students had jobs in Clerical Occupations, the second largest percentage had jobs in Service Occupations, and the third largest percentage had jobs in Marketing and Sales Occupations. In addition, the 12 occupational fields in which 1% or more had jobs were identical for 1981 and 1983. Only two occupational fields showed an increase of 1% or more over the two-year period: Technologists and Technicians, except Health; and Mechanics and Repairers. Only two occupational fields showed a decrease of 1% or more: Service Occupations, and Material Handlers and Laborers.

Salary. Information on the follow-up questionnaires were used to determine hourly salary before deductions for each respondent. The median hourly salaries for different groups were then computed. As data in Table 8 show, the median

Table 8

Median Hourly Salary of Former Vocational Education Students
One Year and Three Years After High School

Group	First Year (1981) N	First Year (1981) Hourly salary	Third Year (1983) N	Third Year (1983) Hourly salary
Employed full time or part time	1,088	$4.32	1,238	$5.30
Employed full time	614	4.65	831	5.71
Employed full time in a field related to training	319	4.90	320	5.77
Employed full time in field not related to training	295	4.48	506	5.57

hourly salary for those employed full time or part time three years after high school was $5.30. This was a 23% increase over the two-year period between the one-year and three-year follow-up surveys. As expected, former students employed full time (35 or more hours per week) were earning a higher hourly salary than those employed part time. Also, those who held full-time jobs in a field related to their training were earning a slightly higher salary than those employed full time in a field not related to their training.

Hours worked per week. About 68% of the former vocational education students who were employed at the time of the three-year follow-up survey were working full time (35 or more hours per week). The average working hours per week for all those employed was 35.4. Two years earlier when the one-year

follow-up survey was conducted, about 62% were working full-time and the average working hours for all those employed were 34.2. This indicates that former students were working slightly more hours per week in 1983 than in 1981.

Relatedness of job to vocational training. All those who were employed at the times of the one-year and three-year surveys were asked whether their jobs were related to the vocational training they received at high school. Additionally, in the three-year follow-up survey former students were asked whether their jobs were related to the vocational training received after high school. The results are shown in Table 9. Three years after high school, approximately

Table 9

Relatedness of Job to Vocational Training As Reported by Former Vocational Education Students One Year and Three Years After High School

Job Relatedness of Vocational Training	Percent of Former Students	
	First Year (1981) (N = 2116)	Third Year (1983) (N = 1389)
Related to high school vocational training	43.1	33.5
Not related to high school training	56.9	66.5
Related to postsecondary training	-	30.9
Not related to postsecondary training	-	24.2
Did not receive postsecondary training	-	44.9

one-third of the respondents reported that their current job was directly or closely related to their high school vocational training. Two years earlier, about 43% said the same. With regard to the relatedness of the job to postsecondary vocational training, about 31% of the respondents reported a direct or close relationship. Among those who had received postsecondary training, more than half reported that their jobs was related to the training received after high school.

Job satisfaction. In the three-year follow-up survey, former vocational education students were asked how satisfied they were with the jobs they had. About 66% of the 1,392 respondents said they were satisfied with their jobs and an additional 28% said "borderline." Only 6% reported dissatisfaction with their present jobs.

Comparison of Results for Special and Nonspecial Needs Groups

Results for the special and nonspecial needs groups are given for the same variables used in the presentation of results for the first year and the third year. They are: educational status, postsecondary vocational training, employment status, months employed since high school, helpfulness of high school training in getting jobs, occupational field of employment, salary, hours worked per week, relatedness of job to vocational training, and job satisfaction.

Educational status. The educational status reported by former vocational students at the time of the three-year follow-up survey is shown in Table 10 for the special and nonspecial needs groups. A slightly higher percentage of nonspecial needs students were attending school (46%) compared with the special needs group (40%). The difference was largest for those who were attending a four-year college or university. Two years earlier in 1981, the proportion of those attending a school was 50% for the nonspecial needs group and 45% for the special needs group.

Table 10

Educational Status of Special and Nonspecial Needs Students
Three Years After High School

Educational Status	Percent of Former Students	
	Special Needs (N = 441)	Nonspecial Needs (N = 1457)
Attending 4-year college or university	12.2	19.7
Attending junior or community college	23.6	23.1
Attending technical, trade, or business school	4.5	3.0
Not attending school or college	59.7	54.2

Postsecondary vocational training. Table 11 presents data on vocational training received after high school for the special and nonspecial needs groups. About 45% of the former students with special needs and about 50% of the nonspecial needs students received some form of postsecondary vocational training. The major training providers were community colleges, followed by technical, trade, or business schools. In terms of where they received training, there was little difference between the special and nonspecial needs groups.

Table 11

Vocational Training Received by Special and Nonspecial Needs Students After Leaving High School

Training Received	Percent of Former Students	
	Special Needs (N = 441)	Nonspecial Needs (N = 1459)
At junior or community college	21.8	24.9
At technical, trade, or business school	12.9	14.0
In apprenticeship program	2.9	4.1
In Regional Occupational Center or Program	6.6	4.5
Other training	6.3	9.2
No training received	54.6	49.5

Note. The percents do not sum to 100.0 since more than one type of training may have been received.

Employment status. The employment status reported by special needs and nonspecial needs students is shown in Table 12. At the time of the three-year

Table 12

Employment Status of Special and Nonspecial Needs Students One Year and Three Years After High School

Employment Status	Percent of Former Students			
	First Year (1981)		Third Year (1983)	
	Special Needs (N = 927)	Nonspecial Needs (N = 2602)	Special Needs (N = 440)	Nonspecial Needs (N = 1458)
Employed	48.7	62.5	60.0	73.0
Employed (full-time military)	3.6	3.0	4.7	3.8
Unemployed	25.1	14.4	22.3	10.3
Not in the labor force	22.6	20.1	13.0	12.9

follow-up, the percentage of special needs students who were employed in civilian jobs was lower than that for the nonspecial needs students by 13%. However, it should be noted that about the same difference in employment rate

existed beween the two groups at the time of the one-year follow-up. The proportion of former students who were not in the labor force was about the same for the special and nonspecial needs groups.

Months employed since high school. Table 13 shows the number of months former students were employed either full time or part time since they left high school. About 8% of the special needs group reported that they had never worked, while only about 3% of the nonspecial needs group said the same. The median number of months employed was about 23 months for the special needs group and 29 months for the nonspecial needs group.

Table 13

Number of Months Special and Nonspecial Needs Students Were Employed Since Leaving High School

No. of Months Employed	Percent of Former Students	
	Special Needs (N = 435)	Nonspecial Needs (N = 1452)
Never worked	7.8	3.3
1 to 6 months	10.8	7.2
7 - 12 months	14.5	9.8
13 - 24 months	18.8	20.5
25 - 36 months	27.6	27.5
More than 36 months	20.5	31.7

Helpfulness of high school training in getting jobs. Former vocational education students were asked whether the high school training they had received was helpful in getting jobs. Their responses are summarized in Table 14. Three years after leaving high school, there was little difference between the special and nonspecial needs groups in their perception of the usefulness of the vocational training they had received at high school. This was also true at the time of the one-year follow-up survey.

Occupational field of employment. As mentioned before, between 1981 and 1983 there was little change in the occupational fields in which the majority of former students held jobs. However, some differences were expected in the occupational fields of employment between the special and nonspecial needs groups.

Table 14

Helpfulness of High School Vocational Training in Getting Jobs
As Perceived by Special and Nonspecial Needs Students
One Year and Three Years After High School

Response	Percent of Former Students			
	First Year (1981)		Third Year (1983)	
	Special Needs (N = 450)	Nonspecial Needs (N = 1586)	Special Needs (N = 406)	Nonspecial Needs (N = 1351)
Not at all	39.4	40.3	26.8	26.9
Some	34.2	31.1	48.8	46.6
A great deal	26.4	28.6	24.4	26.5

Table 15 shows the occupational fields in which 1% or more of the former students held jobs in either 1981 or 1983. For the field of Service Occupations, lower-level categories are shown because the Service Occupations cover a wide range of occupations in terms of high school vocational education program areas.

As data in Table 15 show, the overall pattern of the occupational fields of employment for the special and nonspecial needs groups was very similar in both years. The three largest occupational fields of employment (Clerical, Service, and Marketing and Sales) were identical for the special and nonspecial groups. Also, the next two largest fields were Production Working Occupations and Mechanics and Repairers for both groups.

In spite of the similarity in the overall pattern of the occupational fields of employment for the two groups, some differences existed. For instance, at the time of the one-year follow-up, a considerably higher percentage of special needs students than nonspecial needs students had jobs in Clerical Occupations. This trend continued at the time of the three-year follow-up. Conversely, a considerably higher proportion of nonspecial needs students than special needs students were in the field of Health Technologists and Technicians and in the field of Agricultural and Forestry Occupations. This trend also continued in the following years. The two groups also showed a different trend for some occupational fields. For instance, the proportion of those with jobs in Service Occupations increased for the special needs group over the two-year period but decreased for the nonspecial needs group. On the other hand, the proportion of those with jobs in the field of Mechanics and Repairers decreased over the

Table 15

Occupational Field of Employment of Special and Nonspecial Needs Students One and Three Years After High School

Occupational Field	Percent of Former Students			
	First Year (1981)		Third Year (1983)	
	Special Needs (N = 223)	Nonspecial Needs (N = 956)	Special Needs (N = 281)	Nonspecial Needs (N = 1098)
Clerical occupations	40.4	29.9	39.5	30.8
Service occupations	18.7	18.2	20.2	15.8
Protective service occupations	(1.8)	(0.9)	(2.1)	(1.7)
Food and beverage preparation and services occupations	(8.5)	(9.6)	(8.5)	(6.4)
Health service occupations	(2.2)	(3.6)	(3.2)	(3.4)
Cleaning and building service occupations	(2.2)	(1.8)	(2.8)	(1.6)
Personal service occupations	(4.0)	(2.3)	(3.6)	(2.7)
Marketing and sales occupations	10.8	13.0	11.4	12.8
Mechanics and repairers	5.8	6.8	4.6	8.4
Production working occupations	6.7	7.5	7.8	6.1
Agricultural and forestry occupations	1.8	5.9	1.8	5.6
Technologists and technicians, except health	1.8	2.1	1.8	3.9
Health technologists and technicians	0.9	4.0	1.8	3.6
Material handlers and laborers	5.8	3.7	3.2	2.2
Construction and extractive occupations	3.6	2.8	2.5	3.0
Transportation and material moving occupations	1.3	1.9	2.1	2.4
Teachers, librarians and counselors	0.9	1.2	0.4	1.5
Writers, artists, performers and related workers	0.0	0.5	1.1	0.4
Registered nurses, therapists, and physician's assistants	0.0	0.8	0.0	1.0
Other occupations	1.5	1.7	1.8	2.5
Total	100.0	100.0	100.0	100.0

two years for the special needs group but increased for the nonspecial needs group.

Salary. Table 16 presents the hourly salary data for the special and nonspecial needs groups. Full-time employment was defined as working 35 or more hours per week. Considering all those employed full time or part time, the median

Table 16

Median Hourly Salary of Special and Nonspecial Needs Students
One and Three Years After High School

Group	Median Hourly Salary			
	First Year (1981)		Third Year (1983)	
	Special Needs	Nonspecial Needs	Special Needs	Nonspecial Needs
Employed full time or part time	$4.00	$4.35	$5.09	$5.40
Employed full time	4.60	4.65	5.48	5.77
Employed full time in a field related to high school training	4.80	4.96	5.81	5.75
Employed full time in a field not related to high school training	4.37	4.48	5.13	5.77

hourly salary for the special needs group was 35¢ less than that for the nonspecial needs group one year after high school. This difference in the hourly salary remained about the same two years later. A somewhat different trend appeared when only those who were employed full time were considered. At the time of the one-year follow-up, there was little difference in the hourly salary of the special and nonspecial needs groups. Two years later, however, the special needs students who were working full time on jobs not related to their training were making significantly less money than the nonspecial needs students, while for those working full time in training related fields, there was little difference in salary between the two groups.

Hours worked per week. At the time of one-year follow-up, both the special and nonspecial needs students worked, on the average, about 34 hours per week. Two years later, the average number of hours worked per week was 35 hours for the special needs group and 36 hours for the nonspecial needs group. This indicates that there was no significant difference between the two groups in the number of work hours per week for those employed. As mentioned before, the percentage of former students who were employed was much lower for the special

needs group compared with the nonspecial needs group.

Relatedness of job to vocational training. Results on the job relatedness of vocational training are summarized in Table 17 below. At the time of the one-year follow-up, the percentage of those working on jobs related to their high school vocational training was higher for the nonspecial needs group than the special needs group. Two years later, however, this difference almost disappeared. About one-third of both groups reported that they had jobs related to their high school training.

Table 17

Relatedness of Job to Vocational Training, As Reported by Special and Nonspecial Needs Students One Year and Three Years After High School

Job Relatedness of Vocational Training	Percent of Former Students			
	First Year (1981)		Third Year (1983)	
	Special Needs (N = 462)	Nonspecial Needs (N = 1654)	Special Needs (N = 286)	Nonspecial Needs (N = 1103)
Related to high school vocational training	38.7	44.3	32.9	33.7
Not related to high school training	61.3	55.7	67.1	66.3
Related to postsecondary training	-	-	27.6	31.8
Not related to postsecondary training	-	-	23.4	24.5
Did not receive postsecondary training	-	-	49.0	43.7

For the three-year follow-up, former students were asked whether their jobs were related to training received after high school. About 28% of the special needs group and 32% of the nonspecial needs group reported that their jobs were related to their postsecondary training.

Job satisfaction. Job satisfaction data were collected only for the three-year follow-up. Approximately 63% of the special needs group and 68% of the nonspecial needs group said they were satisfied with their jobs. Thirty-two percent of the special needs group and 26% of the nonspecial needs group answered "borderline." Only 5% of the special needs group and 6% of the nonspecial needs

group were dissatisfied with their jobs. Even though there were some differences in job satisfaction between the two groups, the differences were not significant.

DISCUSSION AND SUMMARY

In this section, the results presented in the previous section are discussed in terms of the specific objectives of this longitudinal study and related issues.

Are FUSE One-Year Follow-up Results Premature?

From the beginning of the implementation of the FUSE system, there has been a consistent and widely shared concern that a one-year follow-up study might be premature. Many vocational educators, especially members of the advisory committee involved in the development of FUSE, felt that former vocational students should be given more time to settle down or complete additional studies before they are followed up. For instance, about 50% were still in school at the time of the one-year follow-up. The concern was that FUSE one-year follow-up results may misrepresent the impact of high school vocational programs by underestimating the employment rate as well as the relatedness of high school training to the field of work of the former vocational education students.

The results presented in the previous section show that the unemployment rate of the former students decreased from 17% in 1981 to 13% in 1983. The percentage of former students who were working in a field related to their high school training decreased from 43% in 1981 to 34% in 1983. The decrease in the unemployment rate may be mainly due to the age factor; that is, more 21-year-olds have jobs than 19-year-olds. The decrease in the percentage of former students who were working in a field related to their high school training may be mainly due to the effect of postsecondary vocational training. That is, about one-half of the former students had some form of postsecondary vocational training and their 1983 jobs may have been more closely related to this post-secondary training than to the training received at high school.

Obviously, the three-year follow-up results differed from the one-year results on the variables mentioned above and on several other variables. However, these differences do not necessarily mean that the results from the one-year follow-up are premature. On the contrary, the results from the one-year and three-year follow-ups seem to complement each other in revealing the true impact of high school vocational education programs over time.

Are Former Students Working in the Field of Training?

One of the key questions to be addressed by this study was whether former

vocational education students were working in the field of their high school training, especially the former students with special needs. According to the results presented in the previous section, 39% of the special needs group and 44% of the nonspecial needs group were working in a field related to their high school training at the time of the one-year follow-up. Two years later, however, only about one-third of both groups were working in a field related to their high school training. This was a significant decrease over the two years, especially for the nonspecial needs group. One possible explanation for this decrease may be that the 1983 jobs of the former students may have been more closely related to their postsecondary training than to their high school training. Forty-five percent of the special needs group and 50% of the nonspecial needs group had postsecondary vocational training. Among those who had postsecondary training, about 55% of both the special and nonspecial needs students reported that their jobs were related to the training received after high school.

How Does Salary Compare for Special Needs and Nonspecial Needs Students?

Several questions related to the salary of former vocational education students were to be addressed by this study. Are there significant salary differences between the special and nonspecial needs groups? Does the difference become larger as time passes? Do the former students with jobs in the field of their high school training make more money than those not in the field of training?

As mentioned before (p.21), the median hourly salary for the special needs group was slightly lower than that for the nonspecial needs group at the time of the one-year follow-up, but the difference was not significant. This was true for all former students who were employed as well as for those employed full-time. The salary differences between the special and nonspecial needs groups remained about the same at the time of the three-year follow-up, indicating no significant difference in the salary increase between the two groups. The only exception to this general trend was a group of people who were working full-time in fields not related to their high school training. For this particular group, the hourly salary increase for the special needs students was significantly smaller ($.76) than that for comparable nonspecial needs students ($1.29). This implies that, as far as salary increases are concerned, the special needs student is better off getting a job in a field related to high school training. However, for the nonspecial needs student, it makes no difference.

In general, those who had jobs in a field related to their high school training were making more money than those not in a training related field. The only exception was for the nonspecial needs group at the time of the three-year follow-up. For that group those employed in a field related to training were making about the same money as those in a field not related to training.

How Do Employment Experiences Compare for Special Needs and Nonspecial Needs Students?

Several variables are considered components of employment experience: the rate of employment, number of months employed since high school, change in occupational field, and change in salary. The results presented in the previous section (pp. 17-18) indicate that the special needs group had less favorable employment experience than the nonspecial needs group in terms of rate of employment and number of months employed. For instance, the employment rate for the special needs group was about 10% lower than that for the nonspecial needs group at the times of both the one- and three-year follow-ups. Also, the median number of months employed was 23 months for the special needs group, while it was 29 months for the nonspecial needs group.

In terms of changes in the occupational field of employment and in salary, the results indicate that the two groups had very similar experiences (pp. 18-21). For instance, the five occupational fields (Clerical Occupations, Service Occupations, Marketing and Sales Occupations, Mechanics and Repairers, and Production Working Occupations) in which the largest percentages of former students had jobs were identical for the two groups for both the one- and three-year follow-ups. Also, considering all former students who were employed, there was no significant difference in the salary increase between the two groups over the two years.

REFERENCES

Bachman, J. D., Kahn, R. L., Mednick, M. T., Davidson, T. N., & Johnston, L. D. Youth in transition, Volume I: Blueprint for a longitudinal study of adolescent boys. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1972. (ERIC Document Reproduction Service No. ED 026 463)

Bailey, J. P. National longitudinal study of the high school class of 1972: Second follow-up survey. Final methodological report. Durham, N.C.: Research Triangle Institute, Center for Educational Research and Evaluation, 1976. (ERIC Document Reproduction Service No. 152 788)

Flanagan, J. C., & Cooley, W. W. Project TALENT: One year follow-up studies. Pittsburgh: University of Pittsburg, 1966.

Kim, Y., & Wright, C. E. Selection and validation of the first annual sample for Project SEE. Menlo Park, California: Educational Evaluation and Research, Inc., 1982.

Morell, J. Follow-up research as an evaluation strategy: Theory and methodologies. In T. Abramson, C. K. Tittle, & L. Cohen (Eds.), Handbook of vocational education evaluation. Beverly Hills, California: Sage Publications, 1979.

O'Reilly, P. A., & Asche, F. M. Follow-up procedures: A national review. Blacksburg, Virginia: Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, 1979.

Wright, C. E., & Kim, Y. Preliminary handbook for Project SEE follow-up studies. Menlo Park, California: Educational Evaluation and Research, Inc., 1982.

APPENDICES

The following appendices are included below.

A. Form Used in 1982 to Obtain Tracking Information

B. June 1982 Newsletter

C. December 1982 Newsletter

D. 1981 FUSE Questionnaire

E. 1983 Three-Year Follow-up Questionnaire

F. Selected Third-Year Data on Former Vocational Education Students by Subgroup

Appendix A

Form Used in 1982 to Obtain Tracking Information

Please answer the following questions. Then fold and seal. This information will be kept confidential and will be used only for future follow-ups in the California State Department of Education Project SEE (Student Employment Experiences).

1. If your name or address on the mailing label is incorrect, please print your correct name or address below:

Name:
Address (number, street, city, state, and ZIP code):

2. Please print the name and address of a person who will know where to get in touch with you during the coming year:

Name:
Address (number, street, city state, and ZIP code):

3. Please give the following information about yourself. If you do not wish to give some of it, leave that part blank.

Date of Birth: _____ (Month) _____ (Day) _____ (Year)

Driver's license number: _____ State _____

Telephone number: _____ (Area Code) _____ (Tel. No)

Thank you very much for your cooperation.

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Appendix B

June 1982 Newsletter

PROJECT SEE STUDENT EMPLOYMENT EXPERIENCES

REPORT TO FOLLOW-UP STUDY PARTICIPANTS

JUNE 1982

This is the first report to participants in Project SEE (Student Employment Experiences). Project SEE has been designed to fulfill a California State Department of Education need for information on the long-term employment experiences of former vocational education students. The major purpose of the study is to find out what happens to former students such as you three and five years after they completed or left high school.

PROJECT SEE IS PART OF A FOLLOW-UP STUDY

Each year a quarter of all the high school districts in California are involved in a follow-up study. Data are collected one year after students complete or leave a high school vocational education program. In 1981, approximately 11,000 former students returned questionnaires. From those about 3,500 were selected to participate in Project SEE. Each year during 1982 to 1984 a group of students will be chosen to participate in Project SEE.

WE NEED YOU, EVERY SINGLE ONE

Project SEE participants were selected to represent students who returned questionnaires last year. One Project SEE participant may, then, be answering for as many as seven former high school students who are not in Project SEE. For this reason it is important that you return the questionnaire that will be sent to you next year. It is equally important that you keep us up-to-date on your current address so that we can send you the three-year follow-up questionnaire and future reports. And, if you have changed your name, we need to know that, too. So please fill out and return the enclosed postcard to the Project SEE Office, 530 Oak Grove Avenue, Room 106, Menlo Park, CA 94025. *All* information that you give is confidential and will be used only for follow-up purposes.

ABOUT HALF OF FORMER STUDENTS WERE STILL ATTENDING SCHOOL

One of the questions that you answered on the 1981 questionnaire was whether you were attending school. Results show that 52% of you were still attending school one year after you completed or left a high school vocational education program. No differences were found between male and female respondents regarding whether they were still attending school.

SIXTY PERCENT WERE EMPLOYED

About 60% of former vocational education students were working full-time or part-time one year after high school. An additional 3% were in military service. About 16% were unemployed. The remaining 21% were not in the labor force; that is, not seeking employment because of choice, illness, full-time student status, pregnancy, or other such reasons.

Employment Status of Former Vocational Education Students

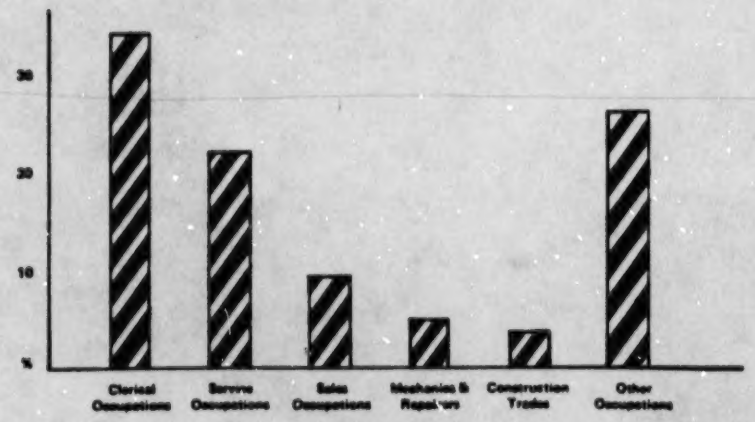
	Percentage of Former Students		
Employment Status	**Male**	**Female**	**Total**
Employed	59	61	60
Military	6	1	3
Unemployed	14	17	16
Not in labor force	21	21	21

Among those of you who were employed full-time or part-time, about 40% had jobs related to their field of vocational training at high school. The other 60% had jobs not related to their vocational training. This relatively low relation between the field of training and current job will probably change as time goes on. The three-year follow-up will provide the answer.

CLERICAL OCCUPATIONS MOST OFTEN REPORTED ONE YEAR AFTER HIGH SCHOOL

Job information was reported by about 6,000 former students who completed vocational education programs and were working full-time one year after high school. Over one-third had jobs in the field of Clerical Occupations. Examples of the Clerical Occupations are secretaries, office clerks, and bookkeepers. Figure 1 below shows the five occupational fields in which a large number of former students had jobs. About 75% of them were working in one of these five occupational fields. The average hourly salary was $5.58 for males and $5.03 for females when the survey was made.

Figure 1: Occupational Field of Vocational Education Students, One Year After High School



FEMALES RATED TRAINING MORE FAVORABLY THAN MALES

About 6,500 former vocational education students reported how they felt about their high school vocational training. They were former students who were working full-time or part-time when the 1981 survey was made. About three-fourths felt that the training prepared them for skills they needed on the job they had. Also, over half of them felt that the training was important in getting the job. Females responded more favorably than males on these two issues. The results for males and females are shown in Figures 2 and 3.

Figure 2: Responses to the question "How well did your high school vocational training prepare you for skills you need on your present job?"

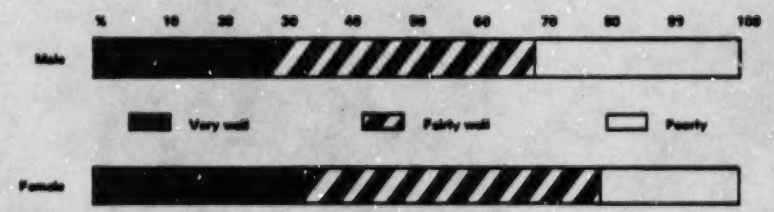
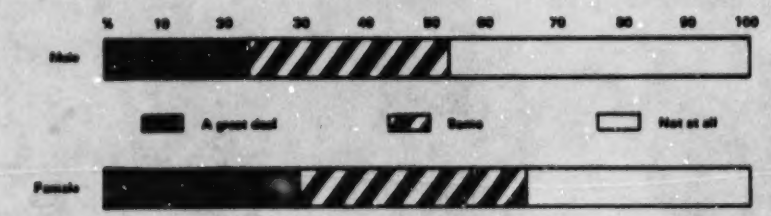


Figure 3: Responses to the question "Do you feel that your high school vocational training was important to you in getting your present job?"



ELEVEN PERCENT OF FUSE STUDENTS COULD NOT RECEIVE QUESTIONNAIRES

In 1981 questionnaires were sent to about 27,000 former students. About 3,000 of these (11%) were returned by the Postal Services as undeliverable. Maybe the high schools did not have up-to-date records. With your help in providing name and address information using the enclosed post card, this should not happen in Project SEE.

More results will be sent to you in the next report to follow-up study participants.

Project SEE Office
530 Oak Grove Avenue, Room 106
Menlo Park, CA 94025

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PROJECT SEE
STUDENT EMPLOYMENT EXPERIENCES

REPORT TO FOLLOW-UP STUDY PARTICIPANTS

DECEMBER 1982

This is the second report to participants in Project SEE (Student Employment Experiences). Project SEE has been designed to fulfill a California State Department of Education need for information on the long-term employment experiences of former vocational education students. The major purpose of the study is to find out what happens to former students such as you three and five years after they completed or left high school.

WHY IT IS IMPORTANT FOR YOU TO PARTICIPATE

Some of you have asked why it is so important for you to participate in Project SEE. There are at least three ways that the study will help vocational education. First, the State of California gets millions of dollars a year from the federal government to help support vocational education. In order to get this money, the state has to provide certain information to the federal government. Project SEE will produce part of the required information. Second, the study will help identify those vocational education programs which are successful in placing students in training-related jobs. Third, information from Project SEE will be used to determine where state resources can best be spent so that more students can get jobs.

THANK YOU FOR SENDING THE CONTACT INFORMATION

Many of you returned the postcard enclosed with the June report that was sent to you. By doing so you gave us information that we can use to get in touch with you in the future. We appreciate your efforts. Another card is enclosed in case you have moved again or changed your name. The three-year follow-up questionnaire will be mailed to you next spring, and we want to make sure that it and other reports reach you.

EMPLOYMENT RATE DIFFERS BY AREA OF TRAINING

In the first report, we promised you more results from the one-year follow-up study that you participated in. Here they are!

One year after high school, 60% of the former vocational education students who answered the questionnaire were employed full or part-time. However, only 24% were employed in jobs which were related to their high school vocational training. As shown in Table 1, there were some differences in this employment rate among the areas of training. For instance, 78% of those who received Health Occupations training were employed, and 62% had jobs which were related to their high school vocational training. Meanwhile, for those who received Home Economics Related Occupations training, 55% were employed, but only 15% were in training-related jobs.

Table 1

Percentage of Former Vocational Education Students Who Were Employed and Who Were Employed in Training-Related Jobs

Area of High School Training	Percent Employed in Any Job	Percent Employed in Training-Related Jobs
Agriculture	59	23
Distributive Education	58	27
Health Occupations	78	62
Home Economics Related Occupations	55	15
Office Occupations	61	24
Trade and Industrial Occupations	59	23
ALL	60	24

EMPLOYERS SATISFIED WITH VOCATIONAL TRAINING IN HIGH SCHOOL

Project SEE will not include an employer survey. It will contact only former students like you. However, the one-year follow-up study that you participated in during 1981 did include an employer survey. Approximately 2,800 employers were asked to evaluate the training received by former vocational students who were working for them. About 68% of the employers responded. They provided ratings on three areas: Technical Knowledge, Work Attitude, and Work Quality. They also gave an overall rating. As seen in Table 2, the employers gave a higher rating on Work Attitude and Work Quality than on Technical Knowledge. The employers considered the overall training received by 78% of the former students either good or very good.

Table 2

Employer Evaluation of Vocational Training Received by Former Vocational Education Students

	Percent of Former Students			
Employer Rating	Technical Knowledge	Work Attitude	Work Quality	Overall Rating
Good or Very Good	74	82	81	78
Average	24	16	17	20
Poor or Very Poor	2	2	2	2

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LOWER EMPLOYMENT RATE FOR 1982 GROUP THAN FOR 1981 GROUP

As you may remember, each year a quarter of all the high school districts in California are involved in an annual follow-up survey of former vocational education students. Data are collected one year after students complete or leave a high school vocational education program. You were one of the 11,000 students who participated in the 1981 follow-up survey. This year, about 12,000 former students participated in the 1982 follow-up survey. Table 3 below compares the employment status of your group (1981) and this year's group (1982). For your group, 60% were working full-time or part-time one year after high school. For the 1982 group about 58% were working after one year. The percentage of people who were not in the labor force was 21% for both the 1981 and 1982 survey groups. These people were not seeking employment because of choice, illness, full-time student status, pregnancy, or other such reasons.

Table 3

Employment Status of Former Vocational Education Students

	Percent of Former Students					
	Male		Female		Total	
Employment Status	1981	1982	1981	1982	1981	1982
Employed	59	55	61	57	60	56
Military	6	5	1	1	3	3
Unemployed	14	19	17	21	16	20
Not in labor force	21	21	21	21	21	21

CLERICAL OCCUPATIONS MOST OFTEN REPORTED FOR BOTH 1981 AND 1982 GROUPS

Job information was reported by former students who completed vocational education programs and were working full-time one year after high school. From this job information the fields of employment were determined. Figure 1 shows a comparison of the job fields for the 1981 and 1982 survey groups. There were some differences bstween the two groups in the percentage of people who were working in a given field. However, for both years most students were working in clerical, service, sales, and mechanic and repairers occupations.

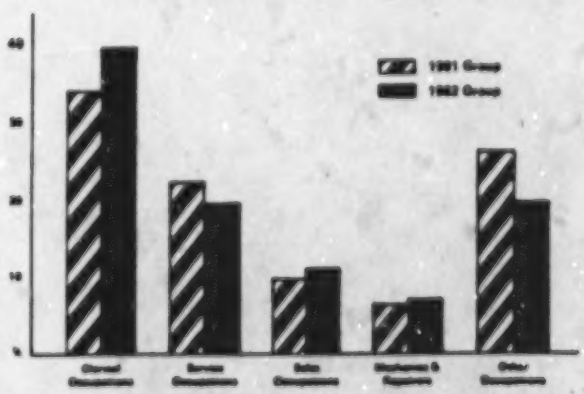

Figure 1: Occupational Field of Vocational Education Students, One Year After High School

NO DIFFERENCE IN PERCEPTIONS OF HIGH SCHOOL VOCATIONAL TRAINING BETWEEN THE TWO SURVEY GROUPS

About 6,500 former students in the 1981 survey and 6,000 in the 1982 survey reported how they felt about their high school vocational training. They were former students who were working full-time or part-time when the one-year follow-up survey was made. For both groups, about three-fourths felt that the training prepared them very well or fairly well for skills they needed on the job. Also, about 60% of them felt that the training was important in getting the job. Generally, the responses of the 1982 survey group were very similar to those of the 1981 group. The results are shown in Figures 2 and 3.

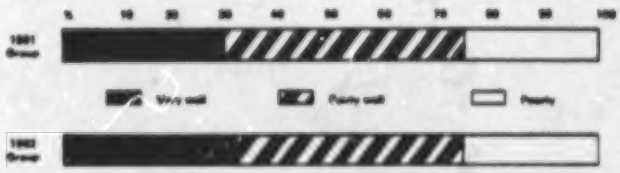

Figure 2: Responses to the question "How well did your high school vocational training prepare you for skills you need on your present job?"

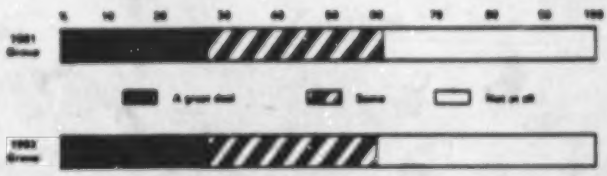

Figure 3: Responses to the question "Do you feel that your high school vocational training was important to you in getting your present job?"

THE THREE-YEAR FOLLOW-UP SURVEY IS COMING

In the Spring of 1983 you will receive the three-year follow-up questionnaire. You will also get another report with more results. As mentioned before, it is very important for the success of Project SEE that we receive a completed questionnaire from each of you. So if you have recently moved or changed your name, please complete and mail the enclosed card. The postage has been paid. We sincerely appreciate your efforts.

Project SEE Office
530 Oak Grove Avenue, Room 106
Menlo Park, CA 94025

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Appendix D

1981 FUSE Questionnaire

Student Follow-up Questionnaire

1. What is your current educational status? (Check ONE.)

☐ Currently attending school ☐ Not currently attending school

2. What is your current employment status? (Check ONE.)

☐ **Employed** *(includes all employment, even if below your qualifications; does not include full-time military service)*

☐ **Employed** *(Full-time military service)*

☐ **Unemployed** *(Not employed, but actively seeking employment)*

☐ **Not in the labor force** *(Not employed and not seeking employment because of choice, illness, full-time student status, retirement, pregnancy, or other such reason)*

NOTE: If you are currently employed, please answer the remaining questions. Otherwise, skip the remaining items.

3. Please provide the following information on your present job:

_____

Name of company or firm *(If self-employed, please write "self.")*

_____

Company or firm mailing address

_____

City State ZIP

Your Immediate Supervisor:

_____ _____ ( )

Last name First Mi. Telephone number

Present job information:

Job title _____

Job duties _____

_____

4. Is this job related to your field of vocational training?

☐ *Yes, it is directly or closely related.* ☐ *No, it is only remotely related or is not related at all.*

5. What is your current salary before deductions? (Do not add in overtime.)

$ _____ per _____

6. The salary in the preceding item is based on how many hours per week employment?

_____ hours per week

7. How well did your high school vocational training prepare you for skills you need on your present job?

☐ Poorly ☐ Fairly well ☐ Very well

8. Do you feel that your high school vocational training was important to you in getting your present job?

☐ Not at all ☐ Some ☐ A great deal

9. If you do not wish to have your employer contacted for information concerning your vocational training, check here:

☐

Thank you very much for your cooperation. Please return this form in the enclosed envelope.

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Appendix E

1983 Three-Year Follow-up Questionnaire

PROJECT SEE
STUDENT EMPLOYMENT EXPERIENCES

Three-Year Follow-Up Questionnaire
April 1983

If your name or address on the mailing label below is NOT correct, make necessary changes on it.

Project SEE is a long-term follow-up study to find out what former vocational education students do after leaving high school. Please complete this questionnaire and return it in the enclosed envelope to:

Project SEE Office
530 Oak Grove Avenue, Room 106
Menlo Park, CA 94025

1. What is your current educational status? *(Check one):*
   - _____ Currently attending a 4-year college or university
   - _____ Currently attending a junior or community college
   - _____ Currently attending a technical, trade, or business school
   - _____ Not attending school or college

2. What is your current employment status? *(Check one):*
   - _____ Employed (includes all employment, even if below your qualifications; does not include full-time military service)
   - _____ Employed (full-time military service)
   - _____ Unemployed (not employed, but actively seeking employment)
   - _____ Not in the labor force (not employed and not seeking employment because of choice, illness, full-time student status, pregnancy, or other such reason)

3. Since you left high school, have you received vocational training? *(Check all that apply):*
   - _____ No
   - _____ Yes, at a junior or community college
   - _____ Yes, at a technical, trade, or business school
   - _____ Yes, in an apprenticeship program
   - _____ Yes, in a regional occupational program or center
   - _____ Yes, other *(specify):* _____

4. Since you left high school, how many months have you been employed either full-time or part-time? *(Check one):*
   - _____ Never worked
   - _____ 1 to 6 months
   - _____ 7 to 12 months
   - _____ 13 to 24 months
   - _____ 25 to 36 months
   - _____ More than 36 months

5. Do you think that your high school vocational training was helpful to you in getting jobs?
   - _____ Not at all
   - _____ Some
   - _____ A great deal

If you are currently employed, please answer the remaining questions. Otherwise, skip the remaining questions and return this form in the enclosed envelope.

6. Please provide the following information on your present job:
   Job title _____
   Job duties _____

7. How many hours per week do you work on this job? _____ hours per week

8. What is your current salary *before* deductions? $ _____ per week OR $ _____ per month

9. Is your present job related to the vocational training you received *at high school? (Check one):*
   - _____ Yes, it is directly or closely related
   - _____ No, it is only remotely related or is not related at all

10. Is your present job related to vocational training you received *after high school? (Check one):*
    - _____ Yes, it is directly or closely related
    - _____ No, it is only remotely related or is not related at all
    - _____ No, I did not receive any vocational training after high school

11. How satisfied are you with your present job?
    - _____ Dissatisfied
    - _____ Borderline
    - _____ Satisfied

Thank You For Your Help

BILL HONIG
Superintendent of Public Instruction
and Director of Education

STATE OF CALIFORNIA

DEPARTMENT OF EDUCATION

STATE EDUCATION BUILDING, 721 CAPITOL MALL, SACRAMENTO, CA 95814

April 22, 1983

Dear Vocational Education Survey Participant:

You may remember receiving last summer a letter notifying you that you had been selected to participate in Project SEE (Student Employment Experience). Project SEE is a long-term follow-up study to find out what former vocational education students do after leaving high school. Last summer many of you also provided us with up-to-date address information. We want to thank you for your cooperation.

We are now calling on you once more for help. Please fill out the enclosed short questionnaire, seal it, and return it as soon as possible. The postage has been paid. The purpose of this follow-up survey is to find out what is happening to you three years after leaving high school. Such information is very important to those who make plans and provide money for high school vocational education.

All information that you provide will be absolutely confidential; your name will never be published or associated in any way with your individual answers. The information obtained from this survey will be used only for research purposes and for educational policymaking.

Project SEE is part of our continuing effort to improve the schools in California. We need your help to successfully carry out this study. We thank you in advance for completing the questionnaire. You will be helping to get better education for those who are now in school.

Sincerely,

R.M. Boldt

Roland M. Boldt, Administrator
Office of Vocational Education
(916) 445-8758

RMB:bcl

Enclosure

Appendix F

Selected Third-Year Data on Former Vocational Education Students by Subgroup

The following tables are included in this appendix:

Table F-1: Third-Year Educational Status of Former Vocational Education Students by Subgroup

Table F-2: Vocational Training Received After High School by Subgroup

Table F-3: Third-Year Employment Status of Former Vocational Education Students by Subgroup

Table F-4: Months Employed Since High School by Subgroup

Table F-5: Helpfulness of High School Training in Getting Jobs by Subgroup

Table F-6: Third-Year Occupational Field of Employment of Former Vocational Education Students by Subgroup

Table F-7: Third-Year Median Hourly Salary of Former Vocational Education Students by Subgroup

Table F-8: Relatedness of Job to Vocational Training by Subgroup

Table F-9: Third-Year Job Satisfaction of Former Vocational Education Students by Subgroup

Table F-1

Third-Year Educational Status of Former Vocational Education Students by Subgroup

Response	Percent of Former Students									
	Handi-capped (N=56)	LEP (N=76)	Disad-van-taged (N=309)	Agri-cul-ture (N=293)	Dis-trib-tive (N=110)	Health (N=93)	HERO (N=146)	Office (N=461)	Trade and Ind. (N=354)	ALL (N=1898)
Attending 4-year college or university	8.9	28.9	8.7	19.1	15.5	5.4	17.8	27.1	16.4	18.0
Attending junior or community college	12.5	32.9	23.3	20.5	26.4	10.8	26.7	26.0	22.3	23.2
Attending technical, trade, or business school	3.6	3.9	4.9	2.0	6.4	3.2	2.1	1.7	4.8	3.4
Not attending school	75.0	34.2	63.1	58.4	51.8	80.6	53.4	45.1	56.5	55.4

Table F-2

Vocational Training Received After High School by Subgroup

Response	Percent of Former Students									
	Handicapped (N=56)	LEP (N=76)	Disadvantaged (N=309)	Agriculture (N=293)	Distributive (N=110)	Health (N=93)	HERO (N=146)	Office (N=461)	Trade and Ind. (N=355)	ALL (N=1899)
No training received	42.8	56.6	56.3	49.5	53.6	11.8	64.4	58.1	40.8	50.7
At junior or community college	17.8	18.4	23.3	29.3	30.0	15.1	19.9	25.8	23.4	24.2
At technical, trade, or business school	16.1	11.8	12.6	9.9	14.5	39.8	8.2	10.0	18.0	13.7
In apprenticeship program	1.8	0.0	3.9	4.1	5.4	2.1	3.4	2.2	7.0	3.8
In ROC/P	17.8	9.2	3.9	4.1	1.0	18.3	3.4	1.9	5.9	4.9
Other training	14.3	5.3	5.2	9.9	7.3	22.6	3.4	5.6	12.7	8.5

Note. The percents do not sum to 100.0 since more than one type of training may have been received.

Table F-3

Third-Year Employment Status of Former Vocational Education Students by Subgroup

Response	Percent of Former Students									
	Handicapped (N=56)	LEP (N=76)	Disadvantaged (N=308)	Agriculture (N=293)	Distributive (N=110)	Health (N=93)	HERO (N=146)	Office (N=461)	Trade and Ind. (N=355)	ALL (N=1898)
Employed	39.3	57.9	64.3	72.0	77.3	80.6	71.2	71.8	72.7	70.0
Employed (full-time military service)	5.4	3.9	4.9	4.4	2.7	1.1	0.7	1.5	8.7	4.1
Unemployed	17.9	32.9	20.5	9.9	10.9	5.4	15.8	11.7	7.6	13.1
Not in labor force	37.5	5.3	10.4	13.7	9.1	12.9	12.3	15.0	11.0	12.9

Table F-4

Months Employed Since High School by Subgroup

Response	Percent of Former Students									
	Handi-capped (N=55)	LEP (N=75)	Disad-van-taged (N=305)	Agri-cul-ture (N=291)	Dis-tribu-tive (N=110)	Health (N=94)	HERO (N=146)	Office (N=461)	Trade and Ind. (N=350)	ALL (N=1887)
Never worked	20.0	9.3	5.2	3.4	4.5	1.1	4.1	3.3	3.1	4.3
1 - 6 months	14.5	13.3	9.5	8.9	7.3	2.1	6.8	8.9	5.1	8.1
7 - 12 months	12.7	21.3	13.1	8.6	10.9	4.3	13.0	10.0	10.3	10.9
13 - 24 months	14.5	17.3	20.0	24.4	17.3	6.4	21.9	21.3	20.6	20.1
25 - 36 months	21.8	20.0	30.5	27.8	32.7	19.1	27.4	28.9	26.3	27.6
More than 36 months	16.4	18.7	21.6	26.8	27.3	67.0	26.7	27.8	34.6	29.0

Table F-5

Helpfulness of High School Training in Getting Jobs by Subgroup

Response	Percent of Former Students									
	Handi-capped (N=51)	LEP (N=72)	Disad-van-taged (N=283)	Agri-cul-ture (N=270)	Dis-tribu-tive (N=102)	Health (N=79)	HERO (N=136)	Office (N=433)	Trade and Ind. (N=331)	ALL (N=1757)
Not at all	35.3	31.9	24.0	26.3	26.5	24.1	31.6	26.1	27.2	26.9
Some	47.1	44.4	50.2	47.8	49.0	30.4	47.1	47.1	48.0	47.1
A great deal	17.6	23.6	25.8	25.9	24.5	45.6	21.3	26.8	24.8	26.0

Table F-6

Third-Year Occupational Field of Employment of Former Vocational Education Students by Subgroup

Occupational Field	Percent of Former Students									
	Handicapped	LEP	Disadvantaged	Agriculture	Distributive	Health	HERO	Office	Trade and Ind.	ALL
Clerical occupations	8.3	40.4	42.9	13.4	45.2	18.4	42.5	52.8	12.2	32.6
Service occupations	29.1	21.3	19.1	15.7	20.3	23.7	18.8	16.4	10.8	16.7
Protective service occupations	(0.0)	(0.0)	(2.9)	(2.3)	(4.8)	(0.0)	(0.0)	(1.5)	(1.8)	(1.8)
Food and beverage preparation and services occupations	(12.5)	(10.6)	(7.6)	(9.7)	(4.8)	(0.0)	(10.4)	(7.1)	(3.6)	(6.8)
Health service occupations	(0.0)	(6.4)	(2.9)	(0.9)	(7.1)	(23.7)	(2.8)	(1.8)	(0.7)	(3.3)
Cleaning and building service occupations	(8.3)	(4.3)	(1.9)	(2.3)	(0.0)	(0.0)	(0.9)	(1.5)	(2.5)	(1.9)
Personal service occupations	(8.3)	(0.0)	(3.8)	(0.5)	(3.6)	(0.0)	(4.7)	(4.5)	(2.2)	(2.9)
Marketing and sales occupations	12.5	12.8	11.0	9.3	19.0	5.3	15.1	14.8	12.5	12.5
Mechanics and repairers	8.3	6.4	3.8	9.3	2.4	1.3	2.8	1.8	21.5	7.6
Production working occupations	16.7	14.9	5.2	8.3	0.0	1.3	1.9	2.7	13.3	6.5
Agricultural and forestry occupations	4.2	0.0	1.9	22.7	2.4	0.0	0.0	1.5	1.8	4.8
Technologists and technicians, except health	0.0	0.0	2.4	2.3	2.4	0.0	8.5	1.2	8.2	3.5
Health technologists and technicians	4.2	2.1	1.4	0.9	0.0	34.2	0.9	2.1	1.1	3.2
Construction and extraction occupations	0.0	2.1	2.9	6.5	1.2	0.0	0.9	0.6	5.4	2.9
Material handlers and laborers	8.3	0.0	3.3	4.2	0.0	0.0	0.0	1.8	3.2	2.4
Transportation and material moving occupations	0.0	0.0	2.9	5.1	0.0	1.3	0.0	0.3	4.7	2.3
Teachers, librarians, and counselors	0.0	0.0	0.5	0.5	1.2	0.0	4.7	1.8	1.1	1.2
Registered nurses, therapists, and physician's assistants	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.3	0.4	0.8
Other occupations	8.4	0.0	2.7	1.8	5.9	2.7	3.9	1.9	3.8	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table F-7

Third-Year Median Hourly Salary of Former Vocational Education Students by Subgroup

Group	Median Hourly Salary									
	Handi-capped	LEP	Disad-van-taged	Agri-cul-ture	Dis-tribu-tive	Health	HERO	Office	Trade and Ind.	ALL
All employed full time or part time	$4.81	$4.99	$5.19	$4.90	$5.20	$7.11	$4.90	$5.25	$5.77	$5.30
Employed full time	4.85	5.00	5.50	5.08	5.75	6.95	5.19	5.60	6.00	5.71
Employed full time in field related to high school training	-*	-*	5.77	5.00	5.48	7.11	5.10	5.77	6.01	5.77
Employed full time in field not related to high school training	4.85	4.41	5.29	5.17	5.78	7.32	5.19	5.44	6.00	5.57

*Fewer than 10 people responded.

Table F-8

Relatedness of Job to Vocational Training by Subgroup

Response	Percent of Former Students									
	Handicapped (N=27)	LEP (N=47)	Disadvantaged (N=212)	Agriculture (N=218)	Distributive (N=88)	Health (N=75)	HERO (N=106)	Office (N=335)	Trade and Ind. (N=281)	ALL (N=1389)
Related to high school vocational training	18.5	27.7	35.8	38.5	44.3	29.3	26.4	32.5	32.0	33.5
Not related to high school vocational training	81.5	72.3	64.2	61.5	55.7	70.7	73.6	67.5	68.0	66.5
Related to postsecondary vocational training	22.2	27.7	28.3	31.2	28.7	78.9	20.8	22.7	35.5	30.9
Not related to postsecondary vocational training	29.6	17.0	24.1	26.1	26.4	10.5	18.9	24.5	28.4	24.2
Did not receive postsecondary vocational training	48.1	55.3	47.6	42.7	44.8	10.5	60.4	52.8	36.2	44.8

Table F-9

Third-Year Job Satisfaction of Former Vocational Education Students by Subgroup

Response	Percent of Former Students									
	Handicapped (N=25)	LEP (N=47)	Disadvantaged (N=212)	Agriculture (N=219)	Distributive (N=88)	Health (N=76)	HERO (N=106)	Office (N=336)	Trade and Ind. (N=283)	ALL (N=1392)
Dissatisfied	4.9	8.5	4.7	7.3	3.4	1.3	2.8	6.3	7.8	5.8
Borderline	32.0	34.0	31.6	27.4	19.3	15.8	33.0	28.3	26.5	27.7
Satisfied	64.0	57.4	63.7	65.3	77.3	82.9	64.2	65.6	65.7	66.5